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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,667	10/25/2001	Paul Reuben Day	ROC920010160US1	2074

7590 04/20/2004

Steven W. Roth
IBM Corporation, Dept. 917
3605 Highway 52 North
Rochester, MN 55901-7829

EXAMINER	
EHICHIOYA, FRED I	

ART UNIT	PAPER NUMBER
2172	2

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/001,667	DAY ET AL.	
	Examiner	Art Unit	
	Fred I. Ehichioya	2172	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 4, 7 - 9, AND 12 - 15* is/are rejected.

7)☒ Claim(s) *5,6,10,11 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 5, 6, 10, 11 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 3, 4, 7, 8, 9, 12, 13, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 6,247,109 issued to Frederick G. Kleinsorge et al (hereinafter "Kleinsorge") in view of USP 6,115,705 issued to Per-Ake Larson (hereinafter "Larson").

Regarding claims 1 and 7, Kleinsorge teaches a method for database query optimization in a computer system having a plurality of central processors, comprising the steps of:

defining a plurality of logical partitions of said computer system, each logical partition having a respective processor resource assignment, wherein each task executing in said computer system is assigned to a respective one of said logical partitions and wherein the definition of a plurality of logical partitions may be dynamically altered (see Abstract and column 4, lines 43 – 67);

comparing a second processor resource assignment to said first processor resource assignment, said second processor resource assignment being associated with said first logical partition at the time said invoking said database query for execution step is performed (see column 5, lines 4 – 15);

Kleinsorge does not explicitly teach defining a database query; constructing a first search strategy for said database query, said first search strategy being dependent on a first processor resource assignment at the time said step of constructing a first search strategy is performed; invoking said database query for execution in a first logical partition, said invoking step being performed after said step of constructing a first search strategy; and automatically constructing a second search strategy dependent on said second processor resource assignment, said step of automatically constructing a second search strategy being performed dependent on the results of said comparing step.

Larson teaches defining a database query (see column 1, lines 23 – 33);

constructing a first search strategy for said database query, said first search strategy being dependent on a first processor resource assignment at the time said step

of constructing a first search strategy is performed (see column 6, lines 28 – 34 and column 11, lines 1 – 40);

invoking said database query for execution in a first logical partition, said invoking step being performed after said step of constructing a first search strategy (see column 6, lines 28 – 34 and 50 – 65); and

automatically constructing a second search strategy dependent on said second processor resource assignment, said step of automatically constructing a second search strategy being performed dependent on the results of said comparing step (see column 6, lines 35 – 41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Larson with the teaching of Kleinsorge wherein the query processor establishes a partition table that defines multiple partitions. The motivation is that partitioning is useful for reducing the amount of time required to execute a query.

Regarding claims 2, 8 and 13, Kleinsorge teaches respective processor resource assignment of each partition comprises a respective number of virtual processors of each partition, said respective number being an integer (see Fig.4 and column 2, lines 49 – 67).

Regarding claims 3 and 14, Kleinsorge teaches step of defining a plurality of logical partitions comprises defining at least one set of processors which is shared by a

set of said logical partitions, said set of said logical partitions containing at least two partitions, said respective processor resource assignment of each partition of said set of partitions including said set of processors (see Abstract and column 4, lines 43 – 67).

Regarding claims 4, 9 and 15, Larson teaches saving said first search strategy in a persistent object for later execution, said saving step including saving said first processor resource assignment in said object (see column 11, lines 1 – 40).

Regarding claim 12. Kleinsorge teaches a computer system, comprising:

a plurality of central processing units (see column 1, lines 46 – 48);

a memory (see column 1, line 51);

a logical partitioning mechanism supporting a plurality of defined logical partitions of said computer system, each logical partition having a respective processor resource assignment, wherein each task executing in said computer system is assigned to a respective one of said logical partitions and wherein the definition of said logical partitions may be dynamically altered (see Abstract and column 4, lines 43 – 67);

Kleinsorge does not explicitly teach a database; a database management system for managing said database, wherein said database management system: (a) performs query optimization of a database query for said database to produce a first search strategy, said first search strategy being dependent on a first processor resource assignment; (b) responsive to invoking said first query search strategy for execution, compares said first processor resource assignment with a second processor resource

assignment associated with a logical partition of execution at the time said first search strategy is invoked for execution; and (c) depending on the results of said comparison performed in (b), automatically constructs a second search strategy dependent on said second processor resource assignment.

Larson teaches a database (see column 5, line 8);

a database management system for managing said database, wherein said database management system (see column 1, lines 24 – 25):

(a) performs query optimization of a database query for said database to produce a first search strategy, said first search strategy being dependent on a first processor resource assignment (see column 3, lines 24 – 53);

(b) responsive to invoking said first query search strategy for execution, compares said first processor resource assignment with a second processor resource assignment associated with a logical partition of execution at the time said first search strategy is invoked for execution (see column 6, lines 7 – 34 and 50 – 65); and

(c) depending on the results of said comparison performed in (b), automatically constructs a second search strategy dependent on said second processor resource assignment (see column 6, lines 35 – 41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Larson with the teaching of Kleinsorge wherein the query processor establishes a partition table that defines multiple partitions.

The motivation is that partitioning is useful for reducing the amount of time required to execute a query.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred I. Ehichioya whose telephone number is 703-305-8039. The examiner can normally be reached on M - F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fred I. Ehichioya
Examiner
Art Unit 2172
April 14, 2004

SHAHID ALAM
PRIMARY EXAMINER